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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,181	02/26/2002	Koichiro Kawaguchi	01272.020511	2428

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EXAMINER
HUFFMAN, JULIAN D

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/082,181	Applicant(s) KAWAGUCHI ET AL.	
	Examiner Julian D. Huffman	Art Unit 2853	

-- The MAILING DATE of this communication appears on th cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 June 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) *4-8,12,17-21 and 25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,14-16,26-28 and 32-35* is/are rejected.

7)☒ Claim(s) *9-11, 13, 22-24, 29-31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Claims 4-8, 12, 17-21 and 25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 7.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 14-16 and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Suda et al. (U.S. 5,602,571).

Suda et al. disclose a printing apparatus having printing means that executes printing on a print medium transported along a transportation path, the apparatus comprising:

upstream transporting means including a pair of rollers arranged upstream of said printing means in the transportation path for transporting the print medium by rotating while sandwiching the print medium (fig. 7, elements 6 and 8);

downstream transporting means arranged downstream of said printing means in the transportation path for transporting the print medium (fig. 7, elements 7 and 9); and

storage means for storing nip position information representative of a position of a nip portion between said pair of rollers within the transportation path, wherein the nip position information relates to an interval between a predetermined reference position located upstream of the nip portion in the transportation path and the nip portion (fig. 7, distance Lo is measured using sensor 13' and stored in calculation circuit and memory shown in fig. 4, as described in column 6, lines 31-36);

one of said pair of rollers is a transportation roller (7, 6) driven by driving means (fig. 1, element 1) and another roller is able to rotate so as to follow rotation of said transportation roller (8, 9);

first detecting means arranged upstream of said upstream transporting means to detect the print medium passing through a predetermined position (fig. 26, emitter 22);

second detecting means for detecting the print medium passing through a nip portion between said transporting means and said pinch roller (fig. 26, detector 22);

wherein said printing means uses thermal energy to generate bubbles in ink so that energy generated by the bubbles can cause the ink to be ejected (column 8, line 25-38);

Suda et al. also disclose a printing method for executing printing on a print medium transported along a transportation path by using printing means, said printing method comprising the steps of:

transporting the print medium by upstream transporting means including a pair of rollers arranged upstream of the printing means in the transportation path while sandwiching the print medium (fig. 7, elements 6 and 8);

transporting the print medium by downstream transporting means arranged downstream of the printing means in the transportation path (fig. 7, elements 7 and 9); and

storing nip position information representative of a position of a nip portion between the pair of rollers within the transportation path, wherein the nip position information relates to an interval between a predetermined reference position located upstream of the nip portion in the transportation path and the nip portion (fig. 7, distance Lo is measured using sensor 13' and stored in calculation circuit and memory shown in fig. 4, as described in column 6, lines 31-36);

one of the rollers is a transportation roller driven by driving means (1) and another roller is able to rotate so as to follow rotation of said transportation roller (fig. 7);

4. Claims 32-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokoi et al. (U.S. 5,982,400).

Yokoi et al. disclose a printing apparatus comprising:

a transportation roller (8) to be driven by driving means through a gear train (fig. 2);

a pinch roller which sandwiches a print medium between said pinch roller and said transportation roller in a cooperative manner (9);

printing means for performing printing on to the print medium (1); and

control means for controlling said transportation roller to repeat a drive and a stop by turns, and for further controlling said printing means to perform printing while the transportation roller is in a stop position (fig. 18, element 121, column 2, lines 46-57),

wherein said control means controls said driving means such that, immediately after an end of the print medium has passed through a nip portion between said transportation roller and said pinch roller, said transportation roller is driven by an excessive driving amount beyond a driving amount of said driving means corresponding to a backlash of said gear train, thereby performing printing of a position corresponding to a transported amount of the print medium(figs. 26A and 26B show the backlash of the gear train in the prior art, which, after advancing the print medium to a predetermined position and reversing for skew correction, continues to advance the print medium to the print zone; the backlash of the gear train is less than the advancement amount required to advance the media to the print position, column 1, line 50-column 2, line 9);

storage means for storing information relating to a transported distance after the end of the print medium passes through a predetermined position until it passes through a nip portion between said transportation roller and said pinch roller, said controlling means controlling said driving means based on the information (the print medium is reversed when it reaches the nip portion, thus the control must function as a storage means for storing the transported distance from a predetermined position to the nip

portion to determine when to reverse the rotation of the motor, column 1, line 50-column 2, line 9);

wherein said controlling means controls printing by said printing means at a position continuous to a prior image printed before an end of the print medium passes through a nip portion, after the end of the print medium has passed through a nip portion between said transportation roller and said pinch roller (fig. 23, column 2, lines 46-57);

wherein said printing means has a plurality of ejection ports for ejecting ink (fig. 22), and said controlling means controls to eject ink from said ejection ports selected for printing on a position corresponding to a transported amount of the print medium after an end of the print medium passes through the nip position between said transportation roller and said pinch roller (fig. 23, column 2, lines 46-57).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suda et al. in view of Broder et al.

Suda et al. disclose everything claimed, as discussed above, with the exception of a spur urged toward a sheet discharging roller.

Broder et al. teach a spur roller urged toward a discharging roller (element 100).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the pinch roller of Suda et al. with the spur roller of Broder et al. The reason for performing the modification would have been to provide a roller which minimizes damage to the paper without loss of traction (column 5, lines 5-16).

Allowable Subject Matter

7. Claims 9-11, 13, 22-24 and 29-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's amendment to claims 1 and 15 does not include the allowable subject matter found in claims 9 and 22 (see fourth paragraph of the remarks).

Applicant's additional arguments are moot in view of the new grounds of rejection necessitated by amendment.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (703) 308-6556. The examiner can generally be reached Monday through Friday from 9:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier, can be reached at (703) 308-4896. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722. Faxes requiring the immediate attention of the examiner may be sent directly to the

examiner at (703) 746-4386. Note that this number will not automatically send a confirmation that the fax was received.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JH

4 September 2003

Stephen D. Meier
Primary Examiner